

Claims

- [c1] What is claimed is:
1. An aseismatic device comprising:
a spring pin having at least a spring therein; and
a positioning ball fixed in a cavity of a platform by an elastic force of the spring;
wherein the spring pin decides a horizontal aseismatic value by adjusting quantities of the spring, and as long as a horizontal force that acts on the aseismatic device is greater than the horizontal aseismatic value, the positioning ball shifts away from the cavity for cushioning the horizontal force.
 - [c2] 2. The aseismatic device of claim 1 wherein the aseismatic device is applied to an overhead hoist transport (OHT) system for enhancing an aseismatic ability.
 - [c3] 3. The aseismatic device of claim 2 wherein the platform is a first platform of the OHT system, and the OHT system further comprises a second platform in contact with the first platform, and the second platform is supported by the first platform.
 - [c4] 4. The aseismatic device of claim 3 wherein the spring

pin is fixed in a position of the second platform corresponding to the cavity of the first platform, and the spring pin passes through the second platform.

- [c5] 5.The aseismatic device of claim 3 wherein the first platform is firmly suspended from at least one hoist truss by a plurality of first supporting rods.
- [c6] 6.The aseismatic device of claim 5 wherein the hoist truss is fixed in a ceiling of a building.
- [c7] 7.The aseismatic device of claim 3 wherein the first platform comprises a plurality of second supporting rods for suspending and supporting a heavy object.
- [c8] 8.The aseismatic device of claim 7 wherein the heavy object is a track of a wafer trolley that delivers wafers.
- [c9] 9.The aseismatic device of claim 3 wherein the first platform is a rectangular structure having a longer side facing a first direction.
- [c10] 10.The aseismatic device of claim 9 wherein the second platform is a rectangular structure having a longer side facing a second direction perpendicular to the first direction.
- [c11] 11.The aseismatic device of claim 1 wherein the cavity is a cone-shaped cavity.

[c12] 12.The aseismatic device of claim 11 wherein walls of the cavity comprise a first tilt angle and a second tilt angle.

[c13] 13.The aseismatic device of claim 3 wherein when the second platform is shifted horizontally by the horizontal force, the second platform is capable of being recovered shortly thereafter by an external force for retaining the aseismatic ability.

[c14] 14.An aseismatic overhead hoist transport (OHT) system comprising:

at least one hoist truss fixed in a ceiling of a building;
a first platform suspended from the hoist truss by a plurality of first supporting rods, the first platform having a cavity on a top surface;

a second platform positioned on the first platform and supported by the first platform, wherein the first platform and the second platform are in contact with each other;

at least an aseismatic device positioned under the hoist truss, the aseismatic device comprising:

at least a spring pin fixed in a position of the second platform corresponding to the cavity of the first platform, the spring pin passing through the second platform;

a positioning ball fixed in the cavity by an elastic force of the spring so that the first platform and the second platform remain relatively stationary; and
a track of a wafer trolley suspended from the first platform by a plurality of second supporting rods;
wherein the spring pin decides a horizontal aseismic value by adjusting quantities of the spring, and as long as a horizontal force that acts on the aseismic OHT system is greater than the horizontal aseismic value, the positioning ball shifts away from the cavity for preventing the aseismic system from being damaged.

[c15] 15.The aseismic OHT system of claim 14 wherein the first platform is a rectangular structure having a longer side facing a first direction.

[c16] 16.The aseismic OHT system of claim 15 wherein the second platform is a rectangular structure having a longer side facing a second direction perpendicular to the first direction.

[c17] 17.The aseismic OHT system of claim 14 wherein the cavity is a cone-shaped cavity.

[c18] 18.The aseismic OHT system of claim 17 wherein walls of the cavity comprise a first tilt angle and a second tilt angle.

[c19] 19. The aseismatic OHT system of claim 14 wherein when the second platform is shifted horizontally by the horizontal force, the second platform is capable of being recovered shortly thereafter by an external force for retaining an aseismatic ability.